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GARDERE WYNNE SEWELL LLP
INTELLECTUAL PROPERTY SECTION
3000 THANKSGIVING TOWER
1601 ELM ST
DALLAS, TX 75201-4761

EXAMINER

RYMAN, DANIEL J

ART UNIT PAPER NUMBER

2616

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/978,429	MEZEUL ET AL.	
	Examiner	Art Unit	
	Daniel J. Ryman	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12, 13, 23-25, 28-30 and 32-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12, 13, 23-25, 28-30 and 32-37 is/are rejected.
- 7) ☒ Claim(s) 1, 2, 4, 9 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-9, 12, 13, 23-25, and 28-30 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 1 is objected to because of the following informalities: in lines 1-2 "circuit within" should be "circuit cards within". Appropriate correction is required.

3. Claim 2 is objected to because of the following informalities: in line 3 "to by" should be "by". Appropriate correction is required.

4. Claim 4 is objected to because of the following informalities: in line 1, "claim 1" should be "claim 32" since claim 4 recites the limitation "the reply packet", which does not have antecedent basis in claim 1, but does have antecedent basis in claim 32. In line 2, "to a sender" should be "to one of the plurality of circuit cards" since claim 32 fails to disclose the step of "routing each packet to a processor and sending the reply packet to a sender" Appropriate correction is required.

5. Claim 9 is objected to because of the following informalities: in line 2, "to a sender" should be "to one of the plurality of circuit cards" since claim 32 fails to disclose the step of "routing each packet to a processor and sending the reply packet to a sender". Appropriate correction is required.

6. Applicant is advised that should claim 12 be found allowable, claim 24 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing,

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despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

7. Claim 29 is objected to because of the following informalities: in line 2, “cards to comprises” should be “cards comprises”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 28 recites “switching the packet to the one of the plurality of circuit cards coupled to a predetermined port of the switch coupled to the one of the plurality of circuit cards specified in the routing label.” It is unclear from this limitation whether the packet is switched to “one of the plurality of circuit cards coupled to a predetermined port of the switch” or whether the packet is switched to “the one of the plurality of cards specified in the routing label.” Since the Examiner is unsure of the scope of the claim, Examiner will not further examine this claim to determine the patentability of the claim with respect to the prior art.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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12. Claim 33 is rejected under 35 U.S.C. 102(b) as being anticipated by Shimojo et al. (USPN 5,787,072).

13. Regarding claim 33, Shimojo discloses an apparatus at a node of a network, comprising: a plurality of circuit cards (ref. 12) and a switching fabric (ref. 22) (see Fig. 1 and col. 1, lines 22-42); means for routing a packet through the switching fabric to one of the plurality of circuit cards based on an internal routing label attached to the packet (col. 1, lines 32-42, where a routing tag is appended to a cell when it is received at a circuit card and then used to control the switching); and means for removing the internal routing label prior to transmission of the packet from the apparatus (col. 1, lines 32-42, where the routing tag is removed before the cells are output).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1, 12, 13, 23-25, 32, and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimojo et al. (USPN 5,787,072) in view of van Landegem (USPN 5,265,091).

16. Regarding claim 1, Shimojo discloses a method of routing packets between a plurality of circuit cards (ref. 12) within a node of a network (Fig. 1), comprising: examining a packet, the packet including an internal routing label specifying one of a plurality of circuit cards (col. 1, lines 32-42, where the cell is switched to a particular card under the control of the routing tag

such that the routing tag specifies a particular card); routing the packet to the one of the plurality of circuit cards specified in the internal routing label (col. 1, lines 32-42, where the cell is switched to a particular card under the control of the routing tag).

Shimojo does not expressly disclose that the routing label includes a packet type where the routing of the packet to the one of the plurality of circuit cards specified in the label occurs in response to the packet type being indicative of a first type. Van Landegem discloses, in a system for switching cells, that a control cell, which is routed in a node using a routing label, additionally includes a Type field (col. 8, lines 25-34). Van Landegem also discloses that the control cell is switched differently than normal cells in that the control cell is sent to a processor on the node (col. 9, lines 12-17), rather than a circuit card. Van Landegem's control cell is used to establish a Virtual Path across the node for subsequent "normal" cells to use (col. 10, lines 6-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use van Landegem's control cell in the context of Shimojo's switching node in order to permit the switching node to set up Virtual Paths through the switching node. In order to do this, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the routing label include a packet type to allow the system to distinguish between "normal" cells and control cells to enable the system to route normal cells to one of the plurality of circuit cards specified in the label and to route the control cell to a controller in the switching node.

17. Regarding claims 12 and 24, Shimojo in view of van Landegem discloses popping the internal routing label from a label stack on the packet after receiving the packet at the one of the plurality of circuit cards (Shimojo: col. 1, lines 36-42, where the internal routing label is removed, i.e. "popped," before the cell is output).

18. Regarding claim 13, Shimojo in view of van Landegem discloses popping the routing label from the label information table stack after receiving the packet at the processor within the system (van Landegem: col. 9, lines 18-22, where the processor determines the output link of the cell and where cell are routed according to routing tags such that the processor “pops” the label from an information table stack).

19. Regarding claim 23, Shimojo in view of van Landegem discloses pushing the internal routing label onto a label stack of the packet after receiving the packet (Shimojo: col. 1, lines 32-36, where cells have the routing label appended to them, i.e. “pushed,” after the cells are received).

20. Regarding claim 25, Shimojo in view of van Landegem discloses popping the routing label from the label stack after receiving the packet at the processor within the node system (van Landegem: col. 9, lines 45-61, where the processor modifies the routing label such that is “pops” the label before it modifies it).

21. Regarding claim 32, Shimojo in view of van Landegem discloses routing the packet to a processor within the system in response to the packet type being indicative of a control packet (van Landegem: col. 9, lines 12-17, where the system routes a control packet to a processor) and sending a reply packet to the one of the plurality of circuit cards specified in the internal routing label (van Landegem: col. 10, lines 6-12 where a confirm control cell is sent to the sender to acknowledge the setup of the connection).

22. Regarding claim 34, incorporating the rejection of claim 1 and 32, Shimojo in view of van Landegem discloses a processor (van Landegem: Fig. 4, ref. PR113), the processor including means for sending a reply packet in response to receiving a control packet to one of

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the plurality of circuit cards identified in the internal routing label (van Landegem: col. 9, lines 45-52, where the processor sets a VP and a new routing field for a control cell, and col. 10, lines 6-14, where a confirm control cell containing the VP and routing field are returned to the sender to acknowledge the setup of the connection).

23. Regarding claim 35, Shimojo in view of van Landegem discloses that the internal routing label further includes a packet type identifier (van Landegem: col. 8, lines 28-34).

24. Regarding claim 36, Shimojo in view of van Landegem discloses that the means for routing also routes based, at least in part, on the packet type identifier (van Landegem: col. 9, lines 12-17, where the node switches control packets to a processor and Shimojo: col. 1, lines 36-42, where the node switches normal packets to a destination circuit card).

25. Regarding claim 37, Shimojo in view of van Landegem discloses that the means for routing includes means for routing the packet to the processor if the packet type identifier indicates a control packet type (van Landegem: col. 9, lines 12-17, where the node switches control packets to a processor and Shimojo: col. 1, lines 36-42, where the node switches normal packets to a destination circuit card).

26. Claims 2-9, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimojo et al. (USPN 5,787,072) in view of van Landegem (USPN 5,265,091) as applied to claims 1, 23, and 32 above, and further in view of Timbs (USPN 5,809,025).

27. Regarding claims 2, 3, 6, 7, and 29, Shimojo in view of van Landegem discloses that routing the packet to the one of a plurality of circuit cards comprises: receiving the packet at a switch (Shimojo: col. 1, lines 32-36); and switching the packet to the one of the plurality of circuit cards coupled to a predetermined port of the switch (Shimojo: col. 1, lines 36-42).

Shimojo in view of van Landegem does not expressly disclose that the port is specified by a shelf identifier, a slot identifier, a link identifier, and a channel identifier included in the internal routing label. Timbs teaches, in a system for switching cells between cards, routing a cell upon an inter-shelf route by using a shelf identifier (BTSI shelf number) and a slot identifier (slot identification number) (col. 10, lines 13-18). Timbs further discloses that, once a cell is received upon a particular destination shelf, the cell is routed according to a link identifier (span line number) and a channel identifier (channel number) (col. 10, lines 24-36). Timbs teaches that routing according to a shelf identifier, a slot identifier, a link identifier, and a channel identifier is beneficial because this permits “near-static routing of a data stream” “with minimal requirements of shared resources” (col. 2, line 66-col. 3, line 3). Simply, in such a system, within the switch, each intermediate module will be able to switch a cell based on static information contained in the module (col. 3, lines 7-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to switch packets according to a shelf identifier, a slot identifier, a link identifier, and a channel identifier included in the internal routing label in the system of Shimojo since such routing permits “near-static routing of a data stream” where this eases the burden on the switch to update the switching tables.

28. Regarding claims 4, 5, 8, 9, and 30, Shimojo in view of van Landegem discloses that routing the packet to a processor and sending the reply packet comprises: receiving the packet at a switch (Shimojo: col. 1, lines 32-36); switching the packet to a predetermined port of the switch coupled to the processor (Shimojo: col. 1, lines 36-42); and switching the reply packet to the one of the plurality of circuit cards coupled to a second predetermined port of the switch

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(van Landegem: col. 10, lines 6-14, where the confirm control cell is routed according to a routing label).

Shimojo in view of van Landegem does not expressly disclose that the port is specified by a shelf identifier, a slot identifier, a link identifier, and a channel identifier included in the internal routing label. Timbs teaches, in a system for switching cells between cards, routing a cell upon an inter-shelf route by using a shelf identifier (BTSI shelf number) and a slot identifier (slot identification number) (col. 10, lines 13-18). Timbs further discloses that, once a cell is received upon a particular destination shelf, the cell is routed according to a link identifier (span line number) and a channel identifier (channel number) (col. 10, lines 24-36). Timbs teaches that routing according to a shelf identifier, a slot identifier, a link identifier, and a channel identifier is beneficial because this permits “near-static routing of a data stream” “with minimal requirements of shared resources” (col. 2, line 66-col. 3, line 3). Simply, in such a system, within the switch, each intermediate module will be able to switch a cell based on static information contained in the module (col. 3, lines 7-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to switch packets according to a shelf identifier, a slot identifier, a link identifier, and a channel identifier included in the internal routing label in the system of Shimojo since such routing permits “near-static routing of a data stream” where this eases the burden on the switch to update the switching tables.

Conclusion

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29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00am-4:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel J Ryman
Examiner
Art Unit 2616

DJR


HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600